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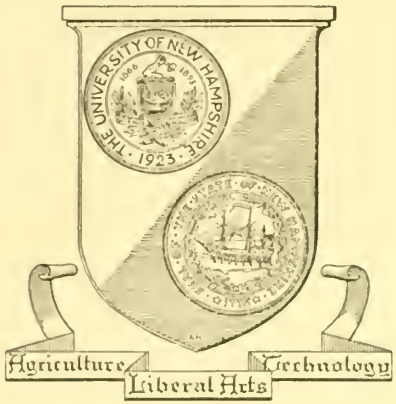

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MARKETS AND PRICES FOR NEW HAMPSHIRE BERRIES

By

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Markets and Prices for New Hampshire Berries

Purpose of the Study

THIS STUDY was undertaken in order to bring together more facts concerning the small fruit industry in New Hampshire. It deals principally with markets, methods of sale, prices, and opportunities for growers of small fruits in New Hampshire. Some data are also included on varieties, yields and returns. The more complete utilization of local markets and possible outlets for surplus berries, if expansion should occur, are also given consideration.

Collection of Data

Contacts were made with producers and retail stores throughout the state for collection of market and price data on small fruits. Both questionnaires and direct contacts were used in obtaining information from hotels, camps, tourist homes, and producers. A number of growers also kept detailed records of production and sales of berries over several years and cooperated in supplying this information. While some city quotations are published, much of the price data was collected direct from producers, retailers, and jobbers.

Berries Grown in New Hampshire

It seems that a greater variety of small fruits might be desirable in New Hampshire whether grown for home use or for sale in local markets.

A greater number of properly selected kinds and varieties will make possible a supply through a longer season.

The grower who wishes to sell at the farm or in local markets will also find it possible to sell more fruit to a given number of customers where several kinds and varieties are grown. From a business standpoint it is usually desirable to have a continuous supply of some products to sell so that customers need never be turned away.

The per cent of growers reporting different kinds of small fruits is given for 1935 and 1939 in Table I.

Table I.—Kinds of small fruits reported by growers, 1935 and 1939

Year	No. different growers reporting	Per cent of growers reporting				
		Straw-berries	Rasp-berries	Black-berries	Blue-berries	Grapes
1935	200	57	66	9.5	26.5	10.
1939	63	60.3	54	15.9	27	11.1

Because of the great variation in crops from year to year, the census data for any one year do not necessarily indicate either the normal supply or the relative values of the various kinds of berries. Nevertheless, comparative census data even though not as recent as could be desired, are of some interest. The 1929 census gives us the last comparative figures for all growers of all berries. Strawberries far exceeded all other berry crops in value. Blueberries were second and raspberries third in importance. Total value of berries produced exceeded $200,000 in that year.

Outlets for Berries

Production of vegetables and small fruits by hotels, camps, and tourist homes

Slightly over one-half the hotels and tourist homes and about one-fifth of the camps produce some vegetables of their own, but less than 10 per cent of these concerns which serve food produce any small fruits. Table II indicates the extent to which these concerns produce the various small fruits.

These types of buyers offer an important potential outlet for berries. They are not producing any appreciable part of the fruits needed and they are not buying the maximum amount which they would buy if good quality supplies were made available to them.

Table II.—Per cent of New Hampshire hotels, camps, and tourist homes which produced small fruits in 1937

	Hotels	Camps	Tourist Homes	All
No. reports received	38	52	50	140
Per cent having garden	53	21	54	41
Per cent raising strawberries	0	2	18	7
Per cent raising raspberries	5	4	20	10
Per cent raising blackberries	5	4	10	6
Per cent picking own blueberries	8	6	10	8
Per cent picking grapes	0	0	8	3

Comments from camps and hotels on produce supplies

Hotel and camp managers seem to be rather critical of the prices and supplies of small fruits and vegetables, and of the service accompanying their purchases from producers. When such criticisms are numerous, they must have some basis. In any event it seems desirable to quote a few of the criticisms given as they may serve to guide us in the correction of the situation.

Camps

Grafton county

"We are a charity camp, little interested in fresh this and fresh that. We buy mostly in No. 10 cans . . . if the local farmer would try to give the summer people a decent price, and not try to make

a year's living during July, August, and the Labor Day week-end, he would do much better."

"The produce man says he gets his vegetables from New Hampshire but his fruit comes from other localities."

Carroll county

"Quantity needed and late season prevent buying many things from local producers."

"I have found it cheaper and more convenient to have fruit and vegetables shipped in from the Boston market, since trucks come in with fresh produce daily. I have tried to deal with local people using my own car to get the produce, but find I do better to depend on the Boston market."

"The farmers from the region of Silver Lake might supply us but have never become interested."

"We have found local supply sources late in the harvesting of crops. Vegetables and fruits bought locally are not sorted or graded with the result that spoilage is high. For these reasons we have found it to our advantage to deal with local fruit dealers who handle fruits and vegetables from a market source that grades and sorts produce and charges prevalent market prices."

"We have used canned goods and market produce from Boston because local supplies are unreliable."

"Nothing would please me better than to buy local supplies but this had been impossible for 15 years, even on contract. Camps cannot pay retail prices for wholesale quantities. Moreover sources of supplies must be dependable."

Belknap county

"Our use of locally grown produce is negligible. We have never planned on its use, because it is neither dependable in quality or time of maturity."

"It is impossible to buy any local produce except blueberries and sweet corn. Through necessity I buy from Boston, express."

Hillsboro county

"It is impossible to get any supplies of any kind in this vicinity. The farmers in this section do not raise enough for their own consumption."

Merrimack county

"We raise our own vegetables for use in camp. We use more oranges and bananas than any other fruit. Only occasionally do we hear of small fruits available in our vicinity. Daily delivery from Boston or Manchester has made it simpler and wiser for us to use produce that is not raised nearby. In our immediate vicinity there are few farmers who can supply us with certain vegetables or fruits in abundance. The majority of farmers work at carpentry, or on

state roads, and only meager supplies are ever available. Neither regular supply or delivery can be depended upon. Occasionally a boy appears at the door with berries."

Hotels

Carroll county

"I have had some six or seven venders from Carroll county (and the town of Pittsfield) come to my door this season . . . none of them comes regularly nor at the time promised . . . however, if produce could be supplied me regularly at the back door, I would be a steady purchaser . . . there is an over-supply of blueberries and an under supply and lack of variety of other berries."

" . . . on the whole, truckmen traveling from Boston have appeared regularly; and we have depended on them, except for corn, peas, and beans, which don't come up to our standards unless picked within a few hours, and except for blueberries which are plentiful here."

" . . . the local berry pickers may appear in hordes one day and not at all for the next several days. Some of the other producers appear regularly with limited stock, and others when they feel like it. We have tried to patronize the regulars as long as they have good quality fruit."

Hillsboro county

"Locals do not seem to be good merchandising people.

1. They expect to get the retail price from a hotel.
2. They grade very poorly.
3. Delivery is undependable.
4. Quality does not seem to bother them; quantity is what they look for.
5. They do not pack attractively; anything goes.

Sorry to be so brutal but in my opinion their own undependability is what keeps their sales so low."

Tourist Homes

Rockingham county

"We raise most of our vegetables . . . have to buy all our small fruits and apples but are fortunate in having them nearby. Blueberries and raspberries are brought to our door and a fruit man calls regularly. . . . "

Coos county

"We buy or pick wild berries. Can all we need for winter."

Prices Paid for Stocks, Supplies, and Labor

Purchase of berry stocks

Farmers have sometimes purchased varieties which are not best suited to their conditions. Losses and disappointments could often

be avoided by asking the Agricultural Experiment Station for information.

Although it may not be advisable to buy the cheapest stocks for planting, it is not usually necessary to pay high prices for good stock. Prices paid for many lots of plants have been entirely out of line with quotations of some reputable companies.

In the spring of 1940, good stocks of standard berry varieties were frequently available from some reputable companies within the following price ranges:

Strawberries—$ .65-$1.00 per 100
Raspberries— $2.50-$3.50 per 100
Blackberries—$2.00-$3.00 per 100
Blueberries— $4.50-$6.50 per 10

Prices paid for picking berries

Payments to berry pickers reported in 1939 were as follows:

	Most frequently paid	Average
Strawberries	3 cents per quart	2.7 cents per quart
Raspberries	2.5 cents per pint	2.5 cents per pint

Blueberry pickers were often paid by the hour, although payments of from six to nine cents per quart were reported for picking highbush berries.

A few growers hold back one-half or one-quarter of a cent a box on strawberries until the end of the season and this is paid to pickers who stay on the job and do satisfactory work. Children are commonly used as pickers for strawberries. Growers could well afford to give closer supervision to the work to prevent excessive bruising.

Prices paid for berry boxes by growers

In 1938 growers reported paying from $.75 to $1.25 per 100, and from $6.38-$8.00 per 1000 for berry boxes. Boxes could have been been bought f.o.b. factory in Ohio, New York, and New Hampshire at from $4.75-$6.00 per 1000. Delivered prices would have ranged from about $5.25-$6.75 per 1000 for direct-from-factory purchases.

In 1939, prices reported as paid by growers were as follows:

Lots of	No. growers reporting	Range in price	Most common price	Average price
100	23	$ .60-$1.25	$1.00	$ .84
1000	13	$6.40-$8.50	$6.50-$7.00	$6.81

It appears that growers could have bought satisfactory boxes at between $6.00 and $7.00 per 1000 direct from factories. Since lower prices are sometimes made on larger shipments, growers might find a cooperative purchase worth while. This means, of course, the anticipation of needs in advance.

In the spring of 1940, berry boxes could be purchased for about $5.25 to $7.00 per 1000, f.o.b. shipping points in the northeast. Delivered prices would have ranged from about $5.65-$7.00 per 1000.

Strawberry Production in New Hampshire

STRAWBERRIES ARE a "best seller." Even though southern berries do come into our markets as much as five months in advance of our season, consumers still appreciate good native berries. This is indicated by a substantial premium for our first berries over stocks which have been shipped in. Average gross returns per acre are the highest for strawberries of any berries grown in New Hampshire.

Census facts on strawberries

Census reports on strawberries give us some data not obtainable elsewhere. However, many garden plots are not included in census reports.

The 1934 reports show that Hillsboro, Rockingham, and Merrimack counties produced about 57 per cent of the state's total, while Coos and Carroll counties produced less than 7 per cent of the total. Almost 1100 farms reported raising some strawberries but the average acreage per farm was only slightly more than one-quarter acre.

Total acreage for the state has shown a downward trend, but acreage per farm has shown an upward trend over the last four census periods of 1909-1934. Value per acre has ranged between $221 and $409 and averaged about $300. Average value per farm has remained under $100.

See appendix (Table I) for census data for the past five census periods, 1899-1934.

Strawberry Varieties

Varieties grown in New Hampshire

During the past five years, 1935-1939, an average of over three-fourths of the strawberry growers planted the variety Howard 17, and over half the acreage has been of this one variety. No other variety has accounted for over 8 per cent of the acreage in any year. Catskill is the only other commercial variety that has recently accounted for any appreciable part of the acreage. Some of the other varieties grown are Dorsett, Fairfax, Aberdeen, and the everbearers, Gem, Mastodon, and Wayzata.

For acreage planted and per cent of producers growing each variety according to grower reports, see appendix (Table V.)

Fairfax strawberries given high rating

Fifty persons were given samples of Howard 17, Fairfax, and Dorsett strawberries. The samplers then rated the berries in order of preference as follows:

	Number of times rated		
	First	Second	Third
Fairfax	34	15	1
Dorsett	12	30	8
Howard 17	2	6	42

Sixty-four per cent said they would pay a premium of at least two cents a quart for their first selection over the third choice, if necessary.

Premiums for Fairfax have been noted in local markets and growers have in some cases obtained from two to five cents a quart more than for such varieties as Howard 17. But it does not appear that premiums are sufficiently large to compensate for the deficiency in yields of the two higher quality varieties.

Keeping quality of strawberries

There is considerable variation in the keeping quality of different strawberry varieties as well as of different lots of the same variety from different sources.

More comprehensive tests are needed to make specific comparisons on a number of varieties, but tests and observations made to date support the following general conclusions on some of the more commonly grown varieties.

Catskill appears to be somewhat better in keeping quality than Howard 17. Fairfax keeps fairly well, but turns an undesirable dark color as it ages. Neither Howard 17 nor Aberdeen rank high in keeping quality. The everbearer, Wayzata, keeps better than either Gem or Mastodon, and is outstanding in maintaining its bright appearance.

Returns for Strawberries

Strawberry yields and returns

Persons growing strawberries for sale are interested in returns from them and these depend on prices and yields. Such varieties as Fairfax and Dorsett sell well in the markets, and sometimes bring a premium, but returns from them average smaller than from Howard 17 and Catskill, because their average yields are lower.

If we base returns on the average jobbing prices received for berries over the past five years and on the crops harvested as reported by growers we would have this approximate comparison.

Table III.—Average returns per acre for strawberries as reported by New Hampshire growers, 1936-1939

Variety	1936	1937	1938	1939	4 year av.*
	dollars	dollars	dollars	dollars	dollars
Howard 17	1120	539	642	868	792
Mixed and others	848	455	418	451	543
All	999	484	516	560	640

*Simple average of the four years.

Note: Returns appear abnormally high for 1936. Prices were quite high in that year and the difference in returns between 1936 and 1939 was almost entirely due to price.

Comparative yields and returns

The 1934 census figures give us comparisons of yields and returns from strawberries in New Hampshire as compared with other sections of New England and the United States.

Yields were smaller than in surrounding states, but prices averaged higher. Returns per acre were lower than for New England but were more than double those for the United States.

The Supply Period

Sectional variation in strawberry supply period

Since a number of factors influence the time of ripening of strawberries, it is rather difficult to select representative records from different parts of the state. Considerable variation does exist in the supply period of growers in the same section of the state. So the records presented here are not representative of all growers in any section.

The records used were from eastern Rockingham, southern Carroll, and western Coos counties. First, peak, and last picking dates during 1938 were:

	First	Peak	Last
Rockingham	June 11	June 21	July 5
Carroll	June 15	June 28	July 14
Coos	June 27	July 12	July 23

This difference of 21 days between the peak dates indicates that there is a possibility of moving strawberries north or south within the state if a surplus exists in either section. Shipments from the northern part of the state into southern cities are likely to be relatively more profitable than shipments in the opposite direction, since there would be less outside competition. Nevertheless it appears that more berries could be shipped from the southern part of the state to northern sections. See Fig. 1 for the supply periods of growers in three different sections in 1938.

Berries move from both Maine and Vermont into the northern section of the state, and especially into towns near the borders. But not many berries are shipped from these states into central and southern New Hampshire late in the season.

The point is that there is sufficient variation in ripening dates to permit growers to shift supplies from one section to another advantageously if supplies exceed the needs of local markets. Certainly the Coos county grower has an almost unlimited field to the south. Even though the market is more limited late in the season there are enough large markets to the south to absorb all the berries that are likely to be raised in northern New Hampshire for many years to come.

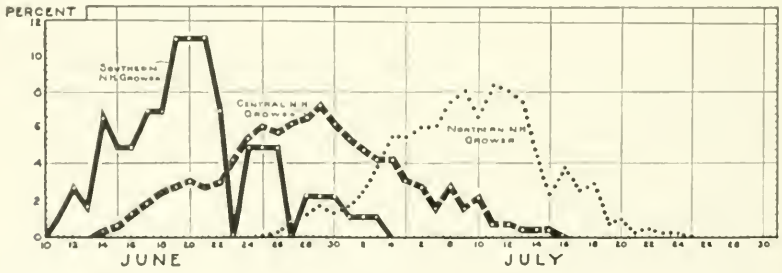

FIG. 1. Per cent of the supplies of strawberries available for market each day during the season for southern, central, and northern New Hampshire growers in 1938.

(Based on a three-day moving average).

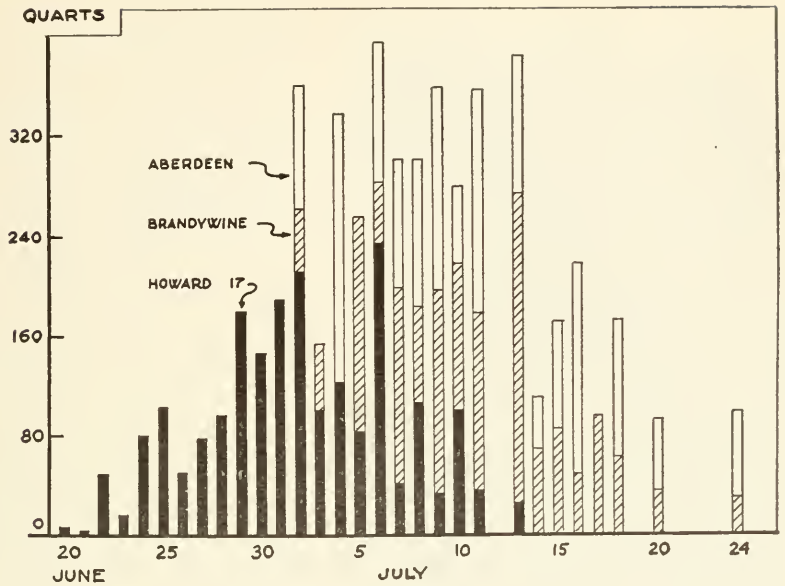

FIG. 2. Sales of three varieties of strawberries raised by a grower who attempted to increase supplies for a late market.

(Note: Aberdeen variety adjusted to basis of equal plantings of other two varieties, Howard 17 and Brandywine).

Length of strawberry marketing season

The length of the strawberry season varies greatly from year to year. Records of a Sullivan county grower* kept over thirty seasons showed:

5 seasons were 15-21 days long
5 seasons were 22-28 days long
11 seasons were 29-35 days long
9 seasons were 36-42 days long

Growers have attempted to lengthen the season by selection of early and late varieties. Everbearing varieties in conjunction with regular varieties are occasionally used to lengthen the season considerably. The average grower has not found a very satisfactory method of prolonging the season much over a week with standard varieties. The late varieties often give him more late berries for sale, but his costs may also be higher, for his total yields may have been lower than with a standard early commercial variety such as Howard 17.

A few growers have endeavored to take advantage of higher prices in a late market by extending their season through a combination of varieties accompanied by certain production practices. A good illustration of the results of such a program is shown in Fig. 2.

*Mrs. G. E. Gay of Charlestown has kept a remarkable set of records covering 32 seasons in the 1900-1939 period and has very kindly allowed the writer to use them. Mrs. Gay and her son have another excellent strawberry patch for the 1940 season. Further reference is made to these records in other sections of this bulletin.

FIG. 3. Wayzata Everbearing strawberries picked in August, 1939.

(Note: The fruit shown here is not large but is bright in color and excellent in flavor).

Sale of everbearing strawberries

An excellent market for strawberries exists in many sections of the state in August. A large number of summer residents and visitors are here at that time. In the small number of cases observed, prices of 25 cents to 40 cents a quart were received for everbearers in August and September. While a few growers have undertaken to grow everbearers commercially, such projects have generally not been very profitable. Some important factor has usually been neglected. Plants may have been set too late, fertility was too low, irrigation was not practiced, damage by crickets and grasshoppers was excessive, or dirty berries were a problem.

It would be of interest to determine just what can be done when a good market exists close by and where all conditions necessary for producing good market berries are observed. It is possible to have an almost continuous supply of strawberries for the home table from June 15 to frost. See Fig. 3 for a high quality everbearer (Wayzata). This variety is excellent for the home table but has yet to be demonstrated commercially in this state. Plants of this variety are high in cost. Commercial production may better be left with the specialist who will meet the exacting conditions necessary. More experimental work is needed. In the meantime a good market is waiting.

Strawberry records over 30 seasons

An interesting historical record of strawberry prices and production for 30 seasons (1900-1937) has been made available by a Sullivan county grower. A brief summary of some of the data from these records is presented here. (For more detailed record, see Table VII (appendix).

Picking dates	
Earliest picking date	June 10, 1918
Latest picking date	Aug. 4, 1917
Earliest peak date	June 25, 1921
Latest peak date	July 16, 1917
Most frequent peak date	July 3
Shortest season	1901—19 days
Longest season	1918—50 days
Lowest average price per season	1905—11.3 cents a quart
Highest average price per season	1921—34 cents a quart
Average price for 30 seasons (weighted)†	18 cents a quart
Highest prices received	45 cents a quart in 1920-'21

*Mrs. G. E. Gay, Charlestown, N. H.
†Almost all jobbing sales

Strawberry Prices

Jobbing prices received by New Hampshire growers

Individual strawberry growers have averaged all the way from 10 cents to 25 cents per quart for jobbing lots of strawberries sold during the past five years. Annual averages for all growers have ranged from about 13 cents to 20 cents, with approximately 15 cents a quart as an average for the five-year period. (See Table IV). Strawberries do not move freely from one section of the state to another because few sections have a large surplus. However, prices in different local markets do vary considerably.

Table IV.—Average jobbing prices per quart received by growers for strawberries in New Hampshire, 1935-1939

	(Simple average prices)		
Years	No. records	Range in averages (cents)	Average (cents)
1935	37	10-17	13
1936	10	15-21.4	19.3
1937	37	10-25	14.3
1938	32	10-20	13.3
1939	16	12.5	15.6

Weighted average* prices based on fewer records for a four year period were about one-half cent under the simple averages.

Jobbing prices in New Hampshire

The prices reported paid for strawberries by retail stores during the local season in 1938 averaged 15.7 cents per quart as against 13.3 cents received by growers from jobbing sales. Probably retailers tend to overstate the prices which they pay growers. A retailer in estimating the average price which he has paid is likely to omit some "bargain" purchases in his calculations. Many of the retail store reports were also obtained in sections with small supplies and high prices. More price reports were obtained from retail stores than direct from growers.

*A weighted average is one in which the quantity sold at each price is considered while a simple average does not take the quantity sold into account.

The counties can be grouped roughly into three price classes as follows:

		Average price per quart
Northern		14.5 cts.
Coos		
Central and Southwestern		15.1-16.6 cts.
Grafton	Merrimack	
Carroll	Cheshire	
Belknap	Sullivan	
Southern and Southeastern		12.6-14.1 cts.
Hillsboro	Strafford	
Rockingham		
State average		15.3 cts.

City jobbing prices

Weekly jobbing quotations for native strawberries have been reported for a number of years in the N. H. Weekly Market Bulletin for Manchester, Concord, Portsmouth, and Keene. For the past ten years, Concord quotations have been the highest or second highest in every year. Simple averages of weekly quotations in cents per quart for the 10-year period, 1930 to 1939, are as follows: Concord-18, Manchester-16.7, Keene-16.5, Portsmouth-16.4.

Returns for early and late strawberry sales

New Hampshire's late strawberry market is attractive, for prices are unusually well maintained in that period as competition from sources farther south has dropped out.

In comparing prices early and late in the season, one should bear in mind that the berries at the end of the season are likely to be smaller and less attractive.

Records of a western New Hampshire grower give us some interesting comparisons of returns from early and late season sales. In recent years growers from states to the south have given him keen competition early in the season due to rapid transportation and improved methods of refrigeration. This particular grower also re-

Table V.—Comparison between strawberry prices at beginning and end of season*

Number of seasons	Average price per quart		Premium per quart on late sales
	First 100 quarts sold	Last 100 quarts sold	
	cents	cents	cents
15 (to 1915)	16.46	14.93	—1.53
15 (after 1915)	23.22	24.64	+1.41
30 seasons	19.84	19.78	— .06

*Data from records of Mrs. G. E. Gay, Charlestown, N. H.

ceived more competition in late years from nearby growers who had earlier locations. In Table V, data are given on first-of-the-season and end-of-the-season sales over 30 years. Note that in the latter 15-year period, late sales averaged higher in price than early sales, but in the earlier years early sales brought the highest prices.

Retail prices to New Hampshire strawberry growers

Over the past five years individual growers have averaged from 11 cents to 35 cents a quart for strawberries sold at retail, with a five-year group average of 19 cents.

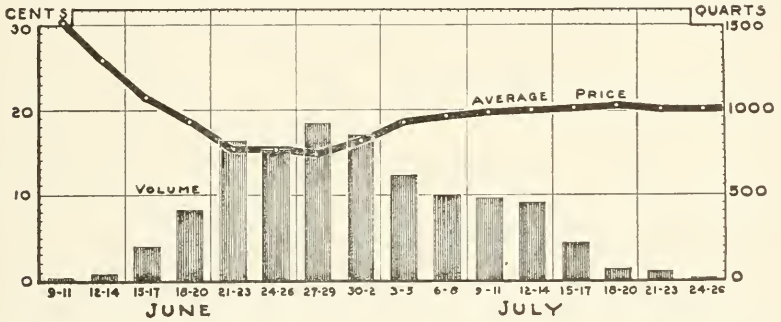

FIG. 4. Retail sales and prices for strawberries for ten small New Hampshire growers in 1938.

(Note the strengthening of prices in the last half of the season).

Retail sales of strawberries in 1938

The daily sales of ten small strawberry growers were averaged for 1938. Retail sales started out at the highest prices of the season but dropped rapidly. The price level at the end of the season was well maintained and a much larger volume was sold at those prices. (Fig. 4).

A price level of 20 cents a quart or more was maintained for 9 days at the beginning of the season, and 15 days at the end of the season.

The number of quarts sold at or above the 20-cent level was 258 at the beginning of the season, and 765 at the end of the season.

The importance of sales of late berries is again demonstrated.

Variation in retail strawberry prices

Over 300 reports on retail strawberry prices were obtained in 1937 and 1938. Prices varied considerably in different sections of the state. Those counties which had prices definitely above or below the two-year state average of 19.3 cents per quart in both years were:

Above average		Below average	
Sullivan	23.8 cents per quart	Hillsboro	18. cents per quart
Carroll	22. cents per quart	Strafford	17.2 cents per quart
Coos	21.6 cents per quart	Rockingham	16.8 cents per quart
Belknap	20.8 cents per quart		

Differences between retail and jobbing prices

The difference between the average retail and jobbing prices to growers does not represent a retail margin. Some growers may job, some retail and some sell in both ways. Some may retail more berries in one part of the season than in another. A few growers may job at prices as high or higher than others obtain for retail sales. A comparison of the average retail and the average jobbing price of growers who sell in both ways gives us a more satisfactory picture, particularly if they sell both ways on the same days.

The differences between average retail and jobbing prices of all growers reporting and of growers who sold in both ways are shown below for different years.

	Differentials in cents per quart for	
	All growers reporting	Growers who jobbed and retailed
1936	3.4	4.2
1937	3.2	3.8
1938	6.6	4.5
1939	2.7	4.8
Average	3.9	4.3

Retail store margins on strawberries

Retail store margins on strawberries vary greatly. The frequent use of strawberries as "leaders" may in part account for this. Many retailers claim they do well to "break even" on strawberries. Price cutting by some retailers who do use them as leaders, and spoilage of berries which are not received in good condition often reduce or eliminate profits.

Close cooperation of the grower and retailer has been noted in a number of areas, and it has been demonstrated that loss from spoilage can be kept low. The grower who finds it necessary to bring in wet berries should impress on the retailer the necessity for moving them that same day. A lower price and a smaller margin are warranted under such conditions in order to encourage the buyer to can or use them quickly. Otherwise the sale may reflect on both the retailer and the grower. Average gross retail margins of stores as reported in 1938 were approximately 4 cents per quart.

Strawberry purchases in Laconia stores in 1938

Contacts were made with 36 independent retail stores in Laconia and Lakeport in 1938. The following facts concerning strawberry purchases were obtained.

Number of stores	36
Per cent carrying strawberries	53
Average weekly purchases	8 crates
Average seasonal purchase	24 crates
Per cent stating quality good	94
Per cent stating quality fair	6
Per cent stating supply good	67
Per cent stating supply fair	7
Per cent stating supply poor	26

Strawberry purchases by hotels, camps, and tourist homes

Strawberries come a little too early for extensive sales to camps and summer hotels. The number reporting purchases is, therefore, smaller than with other berries, and a considerable portion of the purchases were made in July by camps and by hotels which remain open the full year.

The hotels which did report indicate substantial purchases at very good prices. See Table VI for detailed report.

Table VI.—Information on strawberry supplies and prices furnished by hotels, camps and tourist homes in 1937

Question	Tourist homes	Hotels	Boys' and girls' camps	All
	Per cent who answered in the affirmative			
Is quality satisfactory?	88	83	83	85
Are strawberry supplies sufficient?	66	41	30	46
Is regular delivery available?	48	42	29	41
Per cent total supply obtained from local farmers	61	42	36	49
What was the average price paid per quart?	20.8 cts.	20 cts.	18 cts.	20.1 cts.
What was the average amt. bought?	54 qts.	405 qts.	154 qts.	190 qts.
Number reporting	26	18	9	53

Out of State Markets

Boston strawberry prices

Prices of strawberries on the Boston market are of interest to our growers for two reasons. The prices and supplies in the first part of the season influence our local markets because shipments are being made from Boston and from areas which ship to Boston. Later in the season after Connecticut and Massachusetts berries are scarce, prices usually rise, and in that period New Hampshire growers might find the Boston markets useful if their supplies exceed the needs of local markets.

Prices of Massachusetts strawberries on the Farmers' Produce Market in Boston generally rise in the third week of the season. On the average a gain of two or three cents a quart will be made. New Hampshire growers can take advantage of this rising market, since the peak of their supplies are available for the late market.

Supplies of strawberries for the late Boston market

The bulk of the New Hampshire strawberries are normally marketed at the time late Massachusetts and early Maine supplies are coming on the Boston market. In 1939, peak Maine shipments reached the Boston market the week ending July 15, or three weeks

after the peak of Massachusetts supplies. Prices received for the last of the Massachusetts berries and for Maine berries give some indication of what might be expected for berries from northern New Hampshire.

In 1939, Maine strawberries sold largely from 16 cents to 19 cents a quart in Boston and at a level considerably above the late Massachusetts berries. See Fig. 5 for data on supplies and prices.

Premiums paid for tray strawberries on Boston market

A large portion of "nearby" berries are marketed in trays in most local markets. On the Farmers' Produce Market in Boston both tray and crate berries are quoted. Tray berries have brought an average premium of from one and one-half cents to four and one-half cents per quart over the past eight years. Premiums of two to three cents a quart are most frequent.

This premium for tray berries should be considered if growers contemplate marketing in cities close enough to make tray sales practicable.

Comparative market prices for strawberries

It is difficult to obtain fully comparable quotations in different markets. Average prices actually received by growers usually run under the averages of quotations on city markets. Studies of prices during the past five years show that:

Manchester and New Haven, Connecticut, auction prices (weighted) averaged about 4 cents a quart below the averages of Hartford prices quoted by the Department of Agriculture in that state.

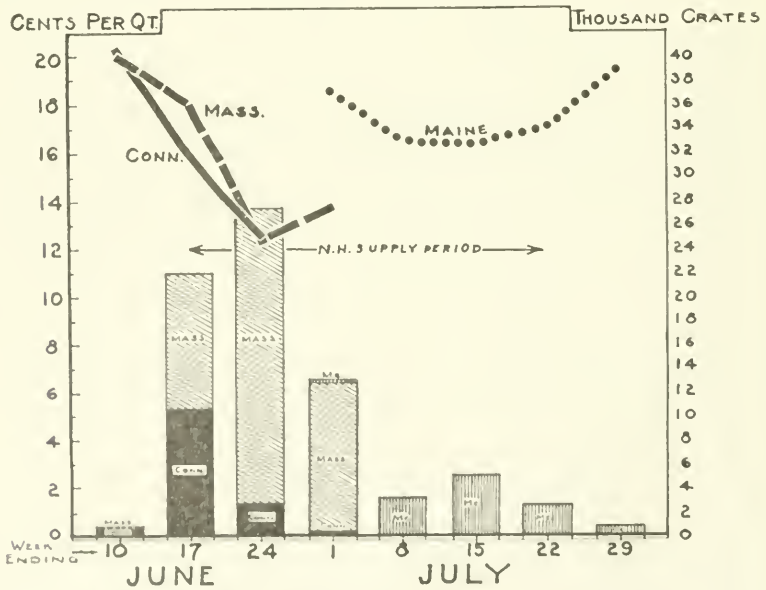

FIG. 5. Average prices and volume of receipts of strawberries from New England states, to Boston, in 1939.

Table VII.—Average price per quart for strawberries in various markets, 1929-39

Year	N. H. Grower Reports	Manchester	Concord	Keene	Portsmouth	Boston	Cape Cod Growers	Portland	New York	Hartford	Conn. Auction
	(cents) (A)	(cents) (B)	(cents) (B)	(cents) (B)	(cents) (B)	(cents) (C)	(cents) (D)	(cents) (E)	(cents) (F)	(cents) (G)	(cents) (H)
1929	20.*	18.1	20.	18.7	18.4	15.2	—	—	21.6	16.9	—
1930	25.*	22.4	23.4	24.7	23.4	18.1	—	—	—	21.7	—
1931	—	19.5	18.8	17.2	19.5	15.4	—	—	20.8	18.2	—
1932	17.9*	15.1	15.2	15.6	14.3	10.1	—	—	14.1	11.1	7.9
1933	13.6*	13.8	16.2	12.2	11.4	7.5	—	—	14.2	10.3	7.1— 8.3
1934	13.3*	17.	16.8	14.4	16.6	11.7	10.9	15.4	16.	14.1	9. —10.5
1935	13.	13.8	15.	15.2	12.5	12.5	10.1	15.2	10.2	14.3	11. —11.
1936	19.3	20.2	23.5	20.1	17.8	16.1	15.	18.8	21.8	17.7	14.5—15.2
1937	14.3	14.9	16.2	15.2	15.	11.6	8.	14.8	15.5	16.5	11.4—11.2
1938	13.3	13.8	16.9	14.5	15.2	12.	10.	13.4	15.8	16.3	10.7—10.
1939	15.6	16.5	17.5	15.8	17.8	13.6	11.3	16.8	15.5	17.5	12.9—12.

*From the records of Mrs. G. E. Gay.
Note: No sharp line can be drawn between jobbing and wholesale prices.
A. Average of jobbing sales in local markets. (Producer records).
B. Averages of weekly quotations, N. H. Weekly Market Bulletin, (Price paid farmers).
C. Crate strawberries—Farmers' Produce Market Reports (Massachusetts Dept. of Agriculture).
D. Weighted average wholesale prices—A Cape Cod Cooperative. (Data furnished by B. Tomlinson).
E. Jobbing prices reported by a Portland Commission House.
F. Average quality Oswego berries, June 10-July 15 (N. Y. Producers' Price Current).
G. Prices paid farmers at Hartford. (Connecticut Dept. of Agriculture Report).
H. Averages reported on New Haven and Manchester Auction. (Data furnished by G. B. Clarke).

A Cape Cod growers' association averaged (weighted price) about 2.3 cents a quart under the average of Boston Farmers' Produce Market quotations.

New Hampshire growers averaged about 1.2 cents per quart under the averages of quotations for four New Hampshire cities as given by the New Hampshire Department of Agriculture.

One explanation of the situation is, of course, that quotations on city markets cover a wide range of quality, and it is difficult to determine a weighted average price from them. A simple average of such prices will usually run higher than weighted average prices. On a glutted market many sales are made below prevailing quotations. At the best, quotations in different markets by different agencies are not fully comparable.

Red Raspberry Production in New Hampshire

Census facts on red raspberries in New Hampshire

MOST of the red raspberries in New Hampshire are grown in small plots of less than one-half acre. The average for farms reporting in 1929 was .16 acres.

The yield reported in one census period is not necessarily representative, but the average yield reported for the past four periods was about 2000 pints per acre.

The average production per acre in 1929 was below that for the United States, but the value per acre was 42 per cent higher. The value per acre was also higher than in adjoining states and above the average for New England.

New Hampshire seems to compare very favorably with other areas on returns for red raspberries.

See appendix (Table 11) for more detailed data concerning the last four census periods.

Although data from the 1929 census is rather old, it is all of that type of data yet available for all counties and towns. The three counties, Hillsboro, Grafton and Sullivan, had about one-half the raspberry acreage of the state. Belknap county with an average of 3526 pints per acre and Carroll county with 2960 pints per acre far exceeded any of the other counties in average yield per acre.

The town of Tilton had the largest production and highest yield per acre in that year.

Latham leading raspberry variety

The Latham red raspberry has accounted for at least two-thirds of the raspberry acreage in the state during the past five years. Chief ranks second for number of growers although a 1938 and 1939 survey shows a larger acreage of Newburg than of Chief.

Latham, Newburg, and Chief account for at least 85 per cent of the raspberry acreage. Other varieties reported in the state were:

St. Regis, Indian Summer, Dike, Cuthbert, Viking, Marcy, Herbert, Taylor, Marlboro, Ontario, Flaming Giant, June, King, Kathryn, Golden Queen.

Table VIII gives the number of growers reporting the principal varieties and the per cent of the total acreage reported for each variety.

Fig. 6 illustrates six varieties of red raspberries and includes some of the newer ones of which few are yet in bearing.

Table VIII.—Acreage of red raspberry varieties in New Hampshire

Variety	Average no. reports	Per cent of the total acreage	
		1936-37	1938-39
Latham	72	69	67
Newburg	12	2	13
Chief	26	12	9
St. Regis	6	2	1
Mixed and unknown	10	9	5
Others	16	6	5
Total		100	100

Prolonging the raspberry season

Since red raspberries come in a period when many summer residents and visitors are here, it is desirable to sell over a longer season. Selection of early varieties such as Chief, St. Regis, or Indian Summer, and of a late variety such as Latham, will usually give a long season of possibly six or seven weeks. The actual length of the season will vary with weather conditions.

The per cent of the season's crop sold for different periods through the season is shown in Fig. 7 for three different varieties as grown by producers in two sections of the state. Even though the per cent of the crop available at any given time may vary from season to season, records which show these facts graphically will be valuable for reference in planning future plantings and sales.

Early varieties may give market advantage

Early varieties make berries available when prices are good. Since about two-thirds of the acreage is given over to Latham, a late variety, there is less competition in the period before Latham ripens.

The grower who has early berries can make earlier contacts with customers than the growers who have only late berries. This sometimes proves advantageous in following through on sales. In considering these marketing advantages we should not lose sight of possible deficiences of the early varieties in size, quality, or yield. Here again, records will prove valuable in determining net gains or losses.

Some growers are using such varieties as Chief, St. Regis, and June to get on the early market. Newer early varieties such as

FIG. 6. Six varieties of red raspberries

(Upper row), left to right: Taylor (midseason), Indian Summer (early), and Marcy (late midseason); (lower row), left to right, Newburg (late midseason), Chief (early), and Dike (early).

Indian Summer, and various early hybrids may prove useful for this purpose.

Red Raspberry Prices

Returns for red raspberries in New Hampshire

The 1938 raspberry crop was reduced by excessively wet weather, while the 1939 crop was cut by winter killing of canes and dry weather. The yields and returns have varied greatly. Average yields on an acre basis ranged from 1142 pints in 1939, to 4084 pints in 1936. Gross returns on an acre basis ranged from approximately $190 in 1939 to $470 in 1936. For the five-year period the average yield was 2883 pints per acre and average returns $362 per acre.

See appendix (Table VI) for more complete data.

Retail and jobbing sales by growers

It appears that from one-third to one-half of the raspberry sales made by growers in the state are retail sales. Many growers have not kept separate records of retail and jobbing sales. Complete rec-

ords for the past four years indicate that 37 per cent were retailed and 63 per cent jobbed in that period.

No very sharp line is drawn between retail sales and prices and jobbing sales and prices. One grower may job berries at a higher price than that at which another may retail them. It may even be profitable for a grower to retail at his farm for a price nearly as low as his jobbing price to stores, because of the expense of delivery.

Jobbing prices for red raspberries in New Hampshire towns

In an average of 46 towns in both 1937 and 1938 information was obtained on buying and selling prices of red raspberries for retail stores. Since the average prices for the state were almost the same in both years the prices for both years have been consolidated in one table. Only towns from which three or more reports were obtained are included. See Table X for detailed figures.

Raspberry prices to growers

Average prices for red raspberries in New Hampshire have been consistently good over a period of years. If growers would travel through such states as New York and Ohio during raspberry season and note prices there, they would return with greater appreciation of the prices they receive here. Raspberry prices fluctuate less from year to year, than strawberry prices. Weighted averages of prices reported by growers ranged from about 11 cents to 16 cents per pint on jobbing sales and 13 cents to 18 cents per pint on retail sales during the past four years (1936-1939). Average jobbing prices between 11 and 12 cents have been common and only in a few cases

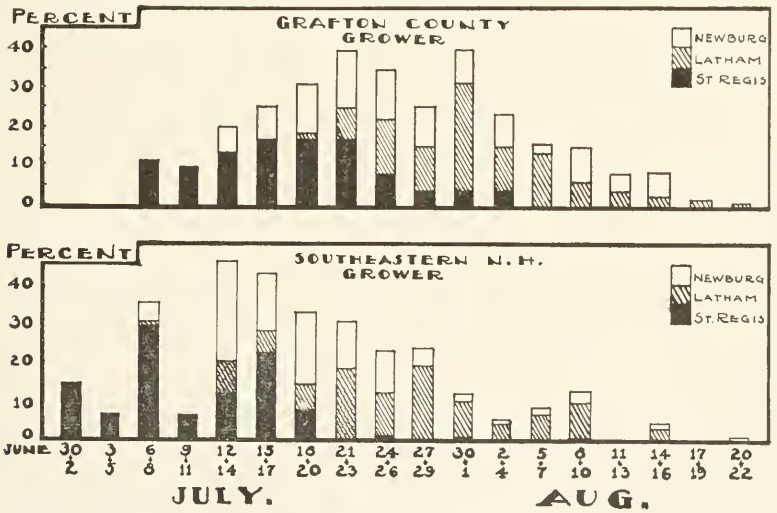

FIG. 7. Relative production of raspberry varieties through the 1938 season for two New Hampshire raspberry growers.

Shows percentage of season's production for each variety for three-day periods through the season.

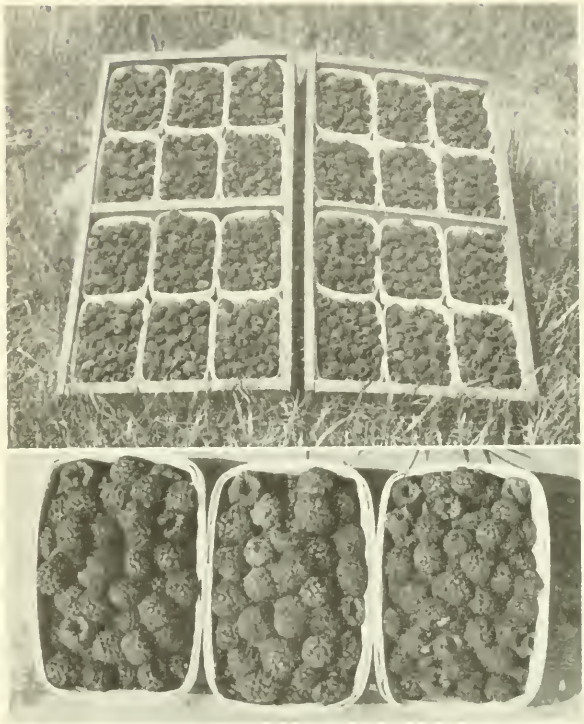

FIG. 8. (Upper) Berries in trays ready to deliver to retail store trade in a western New Hampshire town, in 1939. (Lower), left to right: A Herbert, June Hybrid, Newburg, and Latham raspberries grown on the same farm for local trade.

have growers averaged under 10 cents per pint. In 1939, prices were sharply higher as a result of a short crop caused by winter-killing of canes and dry weather.

See Table IX for figures for each year.

Table IX.—Prices received for raspberries by New Hampshire growers, 1935-39

Year	No. reports	Retail sales	Jobbing sales	All sales
1935	59	16.2 cts.	11.9 cts.	13.6 cts.
1936	17	15.9 cts.	11.8 cts.	12.8 cts.
1937	69	14.4 cts.	11.7 cts.	13.2 cts.
1938	65	14.7 cts.	12.2 cts.	13.7 cts.
1939	22	16.3 cts.	15. cts.	15.8 cts.

Daily sales

Daily sales and prices were obtained from nine small raspberry growers in 1938 and these are shown in Fig. 9. These figures include all sales, and weighted prices are used. Some rise in prices is shown beginning the first week in August. For this group of growers, sales were made from July 8 to August 20th with peak sales on July 25th.

Weather conditions were unsatisfactory in 1938 and many berries were lost due to excessive moisture.

Retail and jobbing prices of red raspberries

Reports on red raspberry prices were obtained in 1937 and 1938 from both growers and retail stores in all counties, and these data were combined. In both years, prices were higher than the average for the state in Carroll county and lower than the average for the state in Coos, Grafton, Rockingham, and Sullivan counties.

They may be grouped as follows:

	Range in average prices (per pint)	
Prices above average in both years	Retail	Jobbing
Carroll county	16.4 cts.	13.2 cts.
Intermediate prices (counties)		
Belknap, Cheshire, Hillsboro, Merrimack, Strafford	14.8-15.5 cts.	12.1-13.2 cts.
Prices below average in both years (counties)		
Coos, Grafton, Rockingham, Sullivan	13.7-14.3 cts.	11.3-12 cts.

State totals and averages

	Total reports	Average prices
1937 Retail	110	15 cts. pint
1937 Jobbing	119	12.4 cts. pint
1938 Retail	150	14.7 cts. pint
1938 Jobbing	159	12.2 cts. pint

Market Outlets for Red Raspberries

Retail sales in Laconia

Contacts were made with 36 retail stores in Laconia and Lakeport in 1938. The following data on raspberry purchases were obtained:

Number stores	36
Per cent stores carrying berries	42
Average weekly purchases	96 pints
Per cent bought locally in season	100
Per cent reporting supply good	92
Per cent reporting quality good	85

Few complaints were offered concerning the quality or supply of red raspberries offered to retailers. Laconia seems to be better supplied with berries than many other towns around Lake Winnipesaukee.

Hotels, camps and tourist home sales

Contacts were made with hotels, camps, and tourist homes in 1937 in order to learn more concerning purchases of red raspberries and the prices paid. Tourist homes paid the most, as would be expected, since many of the purchases would be regarded as retail. Camps paid the least. Table XI gives a summary of the data obtained.

Table X.— Jobbing prices for red raspberries in New Hampshire towns—1937-38. (cents per pint)

(Based on reports from growers and retail stores)

	Below average			Near to average			Above average	
	No. reports	Av. price (cents)		No. reports	Av. price (cents)		No. reports	Av. price (cents)
Littleton	4	10.4	Newmarket	4	12	Hampton	4	13
Exeter	7	11	Alton	6	12.1	Meredith	4	13
Laconia	5	11	Portsmouth	9	12.2	No. Conway	6	13.1
Lebanon	12	11.3	Concord	6	12.4	Rochester	9	13.1
Claremont	14	11.4	Bristol	3	12.8	Conway	7	13.2
Dover	14	11.4	Contoocook	5	12.8	Penacook	3	13.2
Winchester	5	11.5	Plymouth	4	12.8	Gorham	4	13.3
Keene	14	11.7	Hillsboro	4	12.9	Peterboro	5	14
Pittsfield	6	11.7	Wolfeboro	5	12.9	Farmington	5	14.1
Newport	4	11.8		—	—	Lancaster	4	14.2
Wilton	3	11.8		46	12.5	Franklin	3	14.7
Nashua	10	11.9				Silver Lake	6	14.8
	—	—					—	—
Total	98	11.4					60	13.6

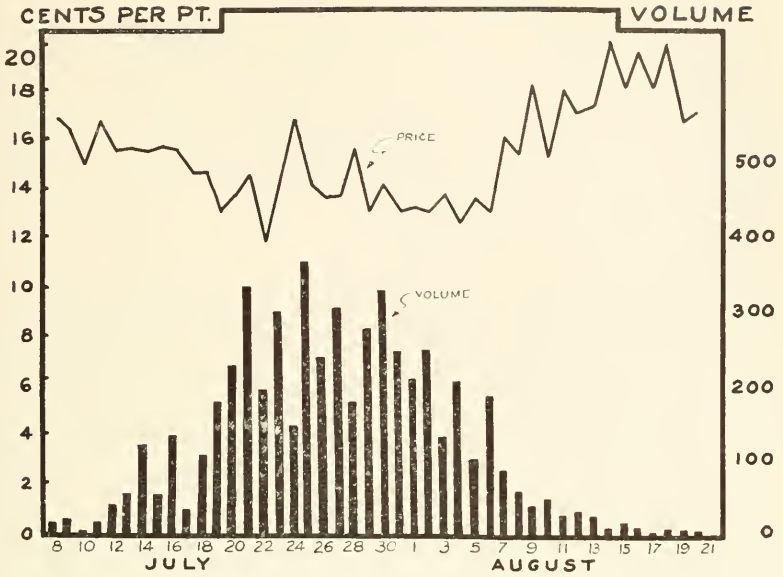

FIG. 9. Daily volume of sales (pints) and average prices per pint for nine small New Hampshire raspberry growers in 1938.

Table XI.—Information concerning raspberry supplies and prices paid by hotels, camps and tourist homes in 1937

Question	Hotels	Camps	Tourist homes	All
	Per cent answering in the affirmative			
Are raspberry supplies sufficient?	52	46	81	62
Is quality satisfactory?	85	86	83	84
Is regular delivery available for local supplies?	39	30	61	45
Per cent of total supply obtained from nearby farmers	71	99	62	—
Average price paid per pint (in cents)	14.5	13.3	15.8	14.5
Average number pints bought during local season*	514	196	53	257

*Average of those purchasing

Out-of-state disposal of red raspberries

Few red raspberries are shipped out of New Hampshire because there is seldom a surplus, and growers net more in local markets. However, at times, disposal of some berries outside may prevent glutting small local markets. We are also interested in the possibilities of shipping, if production should increase beyond the needs of local markets. See Table XII for price comparisons in different markets.

Northern markets are likely to be best early in the season and southern markets best late in the season. Jobbing prices of red raspberries in Portland have been satisfactory during the first two or three weeks in July in the past few years. See Fig. 11 for comparative returns in local markets and prices in Portland.

New Hampshire growers cannot place berries early enough on the Boston Market to get the best prices. But that market is fairly satisfactory in the last week of July and in August.

City jobbing prices of red raspberries

Red raspberry prices in four New Hampshire cities have shown a general downward trend over the 10-year period ending in 1938. Prices in 1939 were sharply higher due in part to a smaller supply because of winter-killing of canes and a dry season. Over this period, Concord and Portsmouth have averaged somewhat higher in price than Manchester and Keene.

Fig. 10 shows average jobbing prices for those four cities, 1927-1939 inclusive.

Prices in Boston, Portland and New York

The Boston market is of principal interest as a late market. Since New Hampshire berries are not quoted on the Boston market, prices for Maine shipments most nearly indicate what New Hampshire growers could expect on the late Boston market.

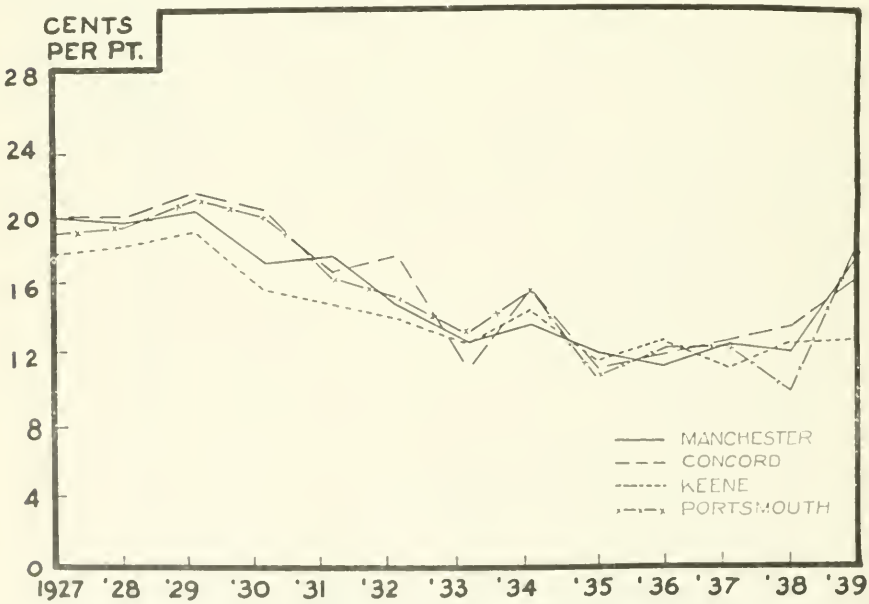

Fig. 10 Averages of high and low raspberry prices paid farmers in four New Hampshire cities, 1927-1939.

Table XII.—Averages of red raspberry quotations in different markets in cents per pint

Year	N. H. Grower Reports	Manchester (A)	Concord (A)	Keene (A)	Portsmouth (A)	Portland (B)	Boston (C)	Hartford (D)	N. Y. C. (E)
1929	15.5*	20	20.9	18.8	20.2	——	——	24	17.4
1930	——	17	20	15.6	19.8	——	——	21.9	17.1
1931	——	17.5	16.1	14.8	16.6	——	13.3	16.8	10.4
1932	——	14.6	14.9	13.8	17.5	——	12.1	15.5	10.8
1933	——	12.7	13	12.7	11	——	10	11.5	9.6
1934	——	13.6	15.5	14.3	15.6	——	12.3	13.5	11.2
1935	11.9	12	11	11.4	10.8	14.3	10	9.3	10.6
1936	11.8	11.2	11.8	12.6	12.2	14.5	10.9	12.3	10.4
1937	11.7	12.4	12.4	10.9	12.5	14.4	10.6	11.3	9.6
1938	12.2	12	13.4	12.4	9.8	13.9	9.8	11.6	13.0
1939	15	17.8	16.2	12.8	18.5	15.4	15	——	10.3

*Farm price, census report.
A. Average of weekly jobbing quotations in N. H. Weekly Market Bulletin.
B. Average of daily quotations from a Portland jobber.
C. Average of high and low prices—Boston Farmers' Produce Market Report.
D. Average reported by Conn. State Dept. of Markets, Hartford, Conn.
E. Average of daily wholesale quotations, N. Y. Producers' Price Current.

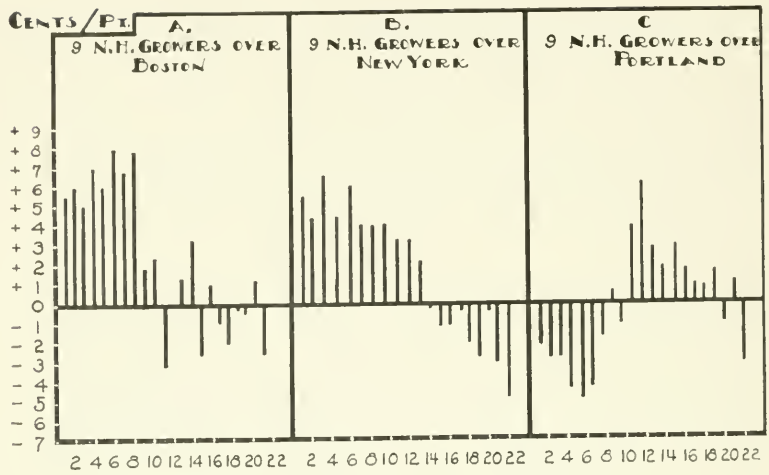

FIG. 11. Price differentials on red raspberries in local and city markets in 1938.

Note that southern raspberry-growers can profit by shipping into northern markets such as Portland early in the season, and northern New Hampshire growers will find it advantageous to ship into southern markets late in the season.

Average prices per pint for Maine raspberries in the Boston market over three-year period in the latter part of the season were:

	Cents per pint		
	1937	1938	1939
July 25-31	12	11	16
August 1-7	12	11	13
August 8-14	15	12	12
August 15-22	17	14	—

See Fig. 11 for comparative returns for berries on local markets and on the Boston market.

In 1938 and 1939 the New York market was higher than either Boston or Portland in early August. Quotations in these three markets compared as follows for the first weeks in August.

	Cents per pint		
	1937	1938	1939
New York (Up River Fancy)	11.1	13.9	21.3
Boston (Average of best)	11.3	11.5	13.4
Portland (Maine)	11.	9.7	11.8

Boston seasonal price changes

Fig. 12 shows the average prices and volume of sales for red raspberries on the Farmers' Produce Market in Boston for the five years ending in 1938. Prices have fluctuated between 10 cents and 14 cents a pint and 12 cents a pint has been the average for the last half of the season. Note the rise of about 2 cents a pint in the last half of the season.

Boston's supply sources

In July, New York, Massachusetts, and Connecticut are, in order, the principal sources of raspberries for Boston. In August, Maine and Massachusetts are the principal sources of supplies. During the past five years, July receipts have averaged about five times as great as August receipts. Receipts during both July and August have averaged about 49 cars for the past five years, but dropped to 23 cars in 1939 due to the short crop.

Raspberry shipping rates

Shipping rates by express on 24 pint crates to Boston will run between ½ cent and 1 cent per pint from most stations in the state. (Example: Concord to Boston—.6 cents.) Rates to Portland will usually run a little under or over 1 cent per pint. (Example: Nashua to Portland—1 cent). Rates to New York city will range from about 1½ cent to 2 cents per pint. (Example: Lancaster to New York city—2 cents per pint). These figures are all based on 100-pound rates for 24-pint crates.

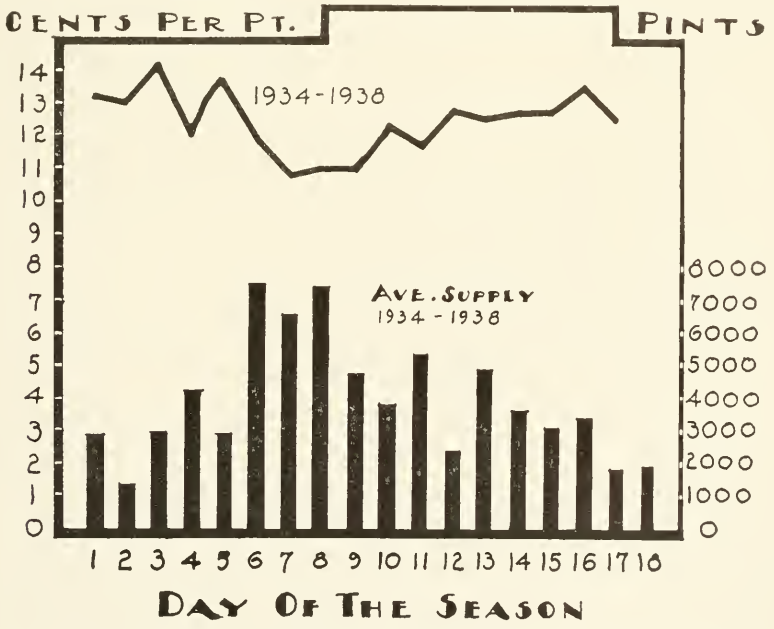

FIG. 12. Averages of price quotations and supplies of red raspberries on the Farmers' Produce Market, Boston, 1934-38.

(Note: Top price for bulk of sales used).

Blackberries

Blackberry Production in New Hampshire

BLACKBERRIES are among the least important small fruits in New Hampshire. Returns per acre are smaller than from other cultivated small fruits. While this may be partly due to their poorer adaptation to our conditions, it is also partly due to the poorer care they receive. However, according to the 1929 census, both yield and value per acre in New Hampshire were greater than for New England as a whole.

Blackberry Production

No real commercial patches of blackberries have been seen in New Hampshire and only a small number of plantings have been noted which receive the care that a commercial patch should receive. An insufficient number of records has been obtained to give a satisfactory picture of production in the state. A considerable portion of the berries are picked from wild plants or patches which have been given little attention.

Reference must be made to census data even though no figures are available since 1929. At that time Sullivan, Belknap, and Grafton counties produced about half of the blackberries in the state.

Average production per acre varied from 333 quarts in Carroll county to 1428 quarts per acre in Cheshire county. Average for the state was 780 quarts per acre. But since so small a portion of the acreage is given good care the production figures and returns are not very suitable for comparison with those of strawberries and raspberries.

Varieties of blackberries grown

Varieties of blackberries commonly reported by growers are Eldorado, Snyder, Blower, and Alfred. The quality of Eldorado is much better than Snyder but the latter appears to have the advantage of greater hardiness.

It seems doubtful whether a satisfactory trade can be built up with a blackberry of such poor quality as Snyder. We need a good quality variety which is hardy and which will give a dependable yield.

Average production of blackberries per acre, as reported in the last four census periods, was 1044 quarts and the average returns per acre for the last three periods was approximately $148. No increase in blackberry planting is indicated. Higher quality and heavier producing varieties are needed to encourage further plantings.

See appendix (Table III) for comparative census data, 1899-1929.

Blackberry Prices

Prices to growers

Growers reported a range in average jobbing prices in 1938 of 10 cents to 19 cents a quart and retail prices averaged 12.5 cents to 20 cents a quart. Averages for all growers reporting were 11.5 cents for jobbing sales and 16.9 cents for retail sales.

Retail prices

Retail prices of blackberries were obtained from stores and growers in 1937 and 1938. The average for the state was 20.3 cents a quart in 1937, and 18.8 cents a quart in 1938. Since there were not wide variations in price and because of a small number of records, an average has been made for these two years. Prices were especially high in Coos and Carroll counties in both years.

The counties are grouped into three price groups as follows:

Counties	Average price (cents per quart)	No. records included	Average price range (cents per quart)
High			
Coos	22.4	23	22.3-22.4
Carroll	22.3		
Middle group			
Rockingham	20.8		
Strafford	19.7	35	18.7-20.8
Grafton	19.4		
Hillsboro	18.7		
Low group			
Sullivan	17.9		
Cheshire	17.6	39	17. -17.9
Merrimack	17.		
Belknap	17.1		
State		97	19.5

Of the 150 retail grocery stores and markets studied in 1938, but 31 per cent handled blackberries. Average buying prices in those 47 stores which were handling them ranged from 10 cents to 19 cents a quart and averaged 15.2 cents a quart. Quality and condition of berries varied greatly but there was much room for improvement in both condition and quality of berries sold through retail stores.

Outlets for Blackberries

Sales to retail stores

Blackberries are not very popular in New Hampshire, and less than a third of the retail stores handle them. They dislike to handle them because they move slowly and losses are heavy.

While sales direct to users, such as hotels, camps, restaurants, and individual families, seem desirable, more sales can be made through retail stores if plans are well made.

Special care should be taken in picking them to avoid bruising. They should be kept out of the sun and held in a cool place. As many sales as possible should be made through stores on order and an effort should be made to move them to the consumer the same day they are picked. Many producers lose interest in their product after the sale to the store is made, but that does not build future business. The growers should know how many boxes are left over until the next day. Any grower located near a town can arrange to service a store in such a way as to move the product quickly to the

satisfaction of both the retailer and the customer.

A really enterprising grower can capitalize on these apparent difficulties because the opportunity for making an improvement is great.

Retail survey in Laconia

Information concerning purchases of blackberries was obtained from 36 independent stores in Laconia and Lakeport in 1938. Few stores carried blackberries because of the limited demand and high perishability. Supplies were rated as poor to fair and quality fair to good.

No. stores	36
Stores selling blackberries	5 (14%)
Average weekly purchases per store	45 qts.
Total purchases for season	136 qts.
Per cent stating quality as good	80
Per cent stating quality as fair	20
Per cent stating supply was fair	20
Per cent stating supply was poor	80

Hotel, camp, and tourist home sales

Data on purchases of blackberries and prices paid were obtained from hotels, camps, and tourist homes in 1937. Hotel purchases averaged 126 quarts or about three times those of tourist homes and boys' and girls' camps. Purchases of blackberries were much smaller than purchases of strawberries and raspberries. Surprisingly, 70 per cent stated quality was satisfactory. Quality is a relative factor, and it is possible that many of those who gave answers are not familiar with the high quality berries which are grown in some sections of the country. A summary of information follows in Table XIII.

Table XIII.—Blackberry supplies and prices for hotels, camps, and tourist homes—1937

	Tourist homes	Hotels	Camps	All
	Per cent answering in the affirmative			
Are local blackberry supplies sufficient?	68	48	33	51
Is quality satisfactory?	72	65	75	70
Is regular delivery available for local supplies?	59	24	29	29
Per cent of total supply obtained from nearby farmers	66	55	29	52
What was the average price paid per quart? (cents)	18.7	16.4	18.8	17.9
What was the average amount bought? (quarts)	35	126	35	64

Direct-to-consumer sales

In 1938, purchases of blackberries in season amounted to an av-

erage of 126 quarts for hotels, and 35 quarts each for camps and tourist homes.

Since supplies to about half of these customers are insufficient, and satisfactory service on supplies is available to less than one-third of them, it appears that opportunity exists to increase sales to these buyers. The grower can make direct deliveries and thus has some control over the condition in which the berries reach the user.

Because of the perishability, growers are in a particularly good position to feature direct-to-consumer trade. Offerings of berries of better quality and in better condition would undoubtedly stimulate sales. Improved varieties, better production practices, greater care in picking, and an effort to move the berries quickly to the consumer will all greatly assist in increasing sales of blackberries.

Boston supplies and prices

Since blackberries are produced on only a small scale in New Hampshire at present, the Boston market is of no particular interest now. If larger quantities of berries of satisfactory quality should be produced in this state they would become available for market between the periods in which the bulk of the New Jersey and Washington blackberries come on the market.

In 1939, the wholesale prices for blackberries from New Jersey ranged between 15½ cents and 21 cents per quart during the first three weeks of August. The largest supplies from Washington came during the third week in August.

Blueberries

Blueberry Production in New Hampshire

IT IS MORE difficult to determine the total production of wild blueberries than of cultivated berries of any kind. The census reports may not include records of blueberries picked by children and city people. Actual production is larger than is shown by census figures or figures obtained from commercial producers.

The 1929 census included data from more individuals than did records since that time. Production for that year was given as 171,268 quarts. Hillsboro and Belknap counties together accounted for 65 per cent of the total crop. Alton and New Ipswich were the largest producing towns and accounted for 44 per cent of the production of the state in that year.

The three leading counties and principal producing towns in each county according to the 1929 census were:

County	Quarts	Town	Quarts
Hillsboro	74,423	New Ipswich	48,607
Belknap	36,514	Alton	26,581
Cheshire	21,048	Rindge	12,473

Comparative returns

Maine and New Hampshire are the two leading blueberry producing states in New England. According to the 1929 census Maine

accounted for about 76 per cent of the total production for the country while New Hampshire produced but 3.4 per cent. New England accounted for 82 per cent of the total production.

The total value of the New Hampshire crop in 1929 was given as $38,515. Value per quart was 22.5 cents or 2 cents above the average for New England.

Local Outlets for Blueberries

Purchases for summer trade

Blueberry supplies are usually available to various buyers in the state at reasonable prices. Over 80 per cent of the hotels, camps, and tourist homes said supplies were satisfactory in 1937. However, only 59 per cent said that regular delivery was available. The average price paid by these concerns was 16.7 cents a quart, and this compares with averages of 13.3 cents reported as received by growers, 14.6 cents paid by retail stores and 19.7 cents received by stores in that year. These concerns were paying a price between the jobbing and retail prices for that year.

Table XIV.—Information concerning blueberry supplies and prices to N. H. hotels, camps, and tourist homes in 1937

	Tourist homes	Hotels	Camps	All
	Per cent answering in the affirmative			
Are local blueberry supplies sufficient?	86	77	82	82
Is quality satisfactory?	100	89	96	95
Is regular delivery available?	63	58	54	59
Per cent of total supply obtained from nearby farmers*	83	90	81	—
What was the average price paid per quart?* (in cents)	17.3	17.2	15.6	16.7
Average amount bought (quarts)	76	564	198	266

*Weighted averages

Blueberry purchases by Laconia stores

In 1938, retail stores in Laconia and Lakeport furnished information on blueberry purchases. About one-third of the retail stores carried blueberries in season and all were purchased locally.

A brief summary of these blueberry data follows:

Number of stores	36
Per cent carrying blueberries	33
Average weekly purchases	87 qts.
Average purchases for season	867 qts.
Per cent berries bought locally	100
Per cent stating quality was satisfactory	100
Per cent stating supply was good	100

Blueberry Prices

Jobbing prices to growers

Average jobbing prices reported by growers over the past five years range from about 12 cents to 21 cents a quart. Some growers sell berries on the bush or make a charge for the privilege of picking. Prices on the bush have ranged all the way from 2 cents to 8 cents a quart, but averages have ranged from 3 cents to 6.5 cents a quart in different years. Occasionally a grower charges 50 cents to 75 cents a day for the privilege of picking. Some difficulty is experienced in checking on pickers and "collecting" for berries picked.

Average jobbing prices for different years are shown in Table XV.

Table XV.—Jobbing sales and prices for blueberries in New Hampshire 1935-1939

Year	Weighted average: Price per quart (cents)	Based on sales of (quarts)
1935	12.9	93,034
1936	20.2	12,689
1937	11.8	31,104
1938	13.	29,969
1939	15.4	40,720

Retailers prices

Records from 127 retail stores in 1938 showed average buying prices for blueberries of 14.6 cents per quart and average selling prices of 19.7 cents per quart.

Counties may be grouped as follows:

Jobbing and/or retail prices		Average price per quart: Jobbing (Cents)	Retail (Cents)
Over 10 per cent above the average of the state	Rockingham	16.8	21.8
5 per cent to 10 per cent above average	Grafton Sullivan Coos Merrimack	15.2-15.9	20.2-20.9
Within 5 per cent of average	Carroll Cheshire Hillsboro	13.9-14.6	18.8-19.8
Over 10 per cent below average	Belknap Strafford	12.2-12.8	16.9-17.5

City jobbing prices

Jobbing prices of blueberries in Keene, Manchester, Concord and Portsmouth are reported in the New Hampshire Weekly Market Bulletin. Averages for the four cities over the last thirteen years in cents per quart, are:

1927—17.8
1928—17.7
1929—24.7
1930—16.5
1931—13.
1932—15.
1933—10.7
1934—15.4
1935—16.7
1936—22.
1937—13.3
1938—16.4
1939—19.4

Portsmouth prices have averaged highest in nine years, while Manchester has averaged highest in three of the last thirteen years. Keene has had the lowest average price in ten out of thirteen years.

Seasonal price changes

Blueberry prices show a general downward trend as the season advances. Average prices over the past 10 years (1929-1938) in four New Hampshire cities show that prices in the third week were 4.6 cents under the first week and in the sixth week were 2.6 cents under the third week.

See Fig. 15 for seasonal change in prices on the Boston market.

Out-of-state Markets for Blueberries

It is difficult to make accurate comparisons of prices in different markets unless quotations on berries of similar quality are available. The descriptive terms which are given in connection with different quotations vary greatly in different markets, and even when the same terms are used they may not be fully comparable. Products sold under the same federal grades would be more nearly comparable but in the markets selected, quotations were not made for federal grades.

While price comparisons may be useful, we must bear in mind that they are approximations and vary considerably in accuracy.

See Tables XVI and XVII for comparisons.

Table XVI.—Prices in out-of-state blueberry markets compared with the average for four New Hampshire cities

Cities compared	Years compared	Number of years in which N. H. cities were: Lower	.1-2 cts. lower	2.1-4 cts. lower	Over 4 cents lower	Av. gross premium in cents in out-of-state market
Portland	6	4	2	1	1	1.4
Boston	11	10	3	7	0	1.7
Hartford	10	9	4	3	2	2.9
New York	9	7	3	2	2	2.9

Note: Portland prices appear high considering that Maine is an important surplus area for blueberries. The Portland prices are those of a jobbing house less 1 cent per quart to adjust to a wholesale basis.

The average premium in these markets would not be over one-half cent a quart after express charges were deducted, and before commission charges. However, there would also be the cost of delivering them to local markets and more time would be required for jobbing to stores than to ship to a city jobber or commission man.

Local markets are more limited in size and could not absorb greatly increased supplies without influencing prices adversely.

The average premium in these cities does not appear very attractive but there are years when prices are distinctly more attractive and much would be gained by shipping. A few such years are cited below:

1929—Boston paid an average premium of about 3.9 cents a quart.
1937—New York city paid an average premium of about 5.8 cents a quart.
1937—Hartford paid an average premium of about 5 cents a quart.

Growers may find it desirable to watch prices in other markets. Vermont cities often prove good markets, especially to growers in the western part of the state.

Shipping costs

Shipping charges from different points in the state do not vary greatly for shipment south, to points like New York city. Express rates from Alton, Claremont, and Greenville vary only to the extent of .3 cents a quart to New York city, and .4 cents per quart to Boston. But shipments to Portland from those same cities vary as much as .8 cents a quart.

Many growers ship by truck into Boston and some large producers also handle berries for smaller producers.

Boston blueberry market

New Hampshire growers are principally interested in markets and prices for blueberries in July, August, and September. In that period in 1939 the following states were in order, the most important sources of supply for the Boston market.

July 1-July 22	(1) Pennsylvania
July 23-29	(1) Pennsylvania (2) Massachusetts
July 30-August 5	(1) Maine (2) New Hampshire (3) Massachusetts
August 6-12	(1) Maine (2) New Hampshire
August 13—September 2	(1) Maine (2) New Brunswick, Canada (3) New Hampshire

Low prices for the season were reached in the week ending August 19, 1939. New Hampshire berries averaged among the lowest in price. A large portion of the August berries reaching the Boston market from New Hampshire appear to be low bush blueberries.

Boston receives an average of over 200 carloads of blueberries annually. About 42 per cent arrive in August, 32 per cent in July, and June and September receipts are about equal.

See Fig. 13 for volume of shipments of berries from various states.

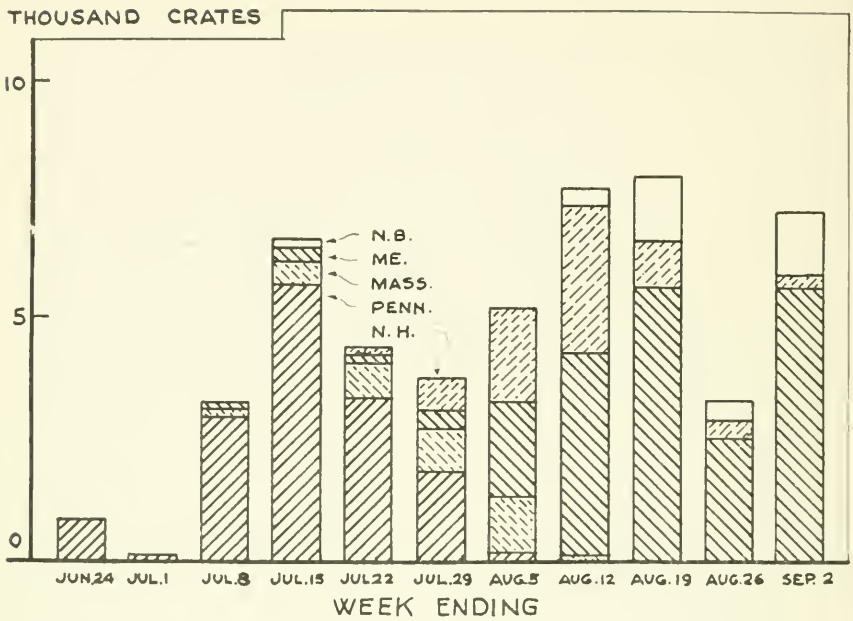

FIG. 13. Volume of shipments of blueberries according to the state of origin, Boston, 1939.

New Hampshire blueberries in Boston

Since New Hampshire does not have a particularly good reputation on the Boston market, the following suggestions for improvement may be in order:

(1.) The production and planting of early maturing and hardy, large, cultivated types.

(2.) Greater use of cleaning machines (See Fig. 14) for low bush blueberries and of sizing machines for both low and high bush blueberries to facilitate sale of berries under grades and brands. At least one grower has developed a sizing machine and several are now using cleaning machines.

(3.) Increased participation of growers in improved production practices such as weeding, burning, pruning, fertilization, and selection of stocks recommended by experiment stations and by successful growers.

When quotations on New Hampshire blueberries are compared with those of Maine and Nova Scotia on the same sale dates we find that over the last five years (1935-1939) Maine blueberries averaged 3.3 cents per quart higher, and Nova Scotia berries, 5.6 cents per quart higher than New Hampshire berries.

The poor reputation and lower prices of New Hampshire berries may be partly due to some shipments of low bush blueberries which have not been properly cleaned and sized.

Table XVII.—Averages of blueberry jobbing quotations in different markets, 1929-1939

Year	N. H. Grower reports	Manchester	Concord	Keene	Portsmouth	Portland	Boston	Hartford	N. Y. C.
			(All figures in cents per quart)						
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
1929	23.*	24.7	23.4	24.9	25.8	——	28.6	——	——
1930	14.*	16.4	17.2	15.	17.6	——	18.6	17.4	——
1931	14.*	14.	13.4	11.5	13.	——	15.6	14.3	13.9
1932	14.*	14.8	13.5	12.7	19.2	——	15.2	14.8	14.4
1933	19.*	11.	10.7	10.6	10.6	——	12.9	12.7	11.9
1934	15.*	17.	15.3	13.6	15.6	17.6	16.6	17.5	15.7
1935	——	18.1	14.8	15.	18.9	18.1	18.2	20.4	16.6
1936	20.2	22.6	22.9	17.6	25.	23.6	21.0	23.7	25.2
1937	11.8	13.5	13.5	12.1	14.2	17.8	15.4	18.3	19.1
1938	13.	17.7	15.2	14.4	18.4	17.2	17.4	18.1	18.9
1939	15.4	19.9	18.9	17.8	20.9	18.6	18.4	22.5	20.1
5-yr., 1935-39 av.		18.4	17.1	15.4	19.5	19.1	18.1	20.7	20.

* Based on reports from a southern N. H. producer.
A. Averages of reports direct from growers.
B-C-D-E. Averages of weekly quotations reported in N. H. Weekly Market Bulletin.
F. Average of jobbing quotations from a Portland concern.
G. Average of high and low prices—Boston Farmers' Produce Market Report.
H. Average of jobbing quotations reported by the Connecticut Dept. of Markets, Hartford.
I. Averages of wholesale quotations reported by Producers' Price Current for July (Pa. berries), August and Sept. (Me. berries).

Farmers' Produce Market in Boston

Volume and prices of blueberries given in the Boston Farmers' Produce Market reports of the Massachusetts Department of Agriculture are shown in Fig. 15. In 1939 and the two preceding five-year periods, prices show a general downward trend. The season started on the 28-33 cents level and ended at the 12-16 cents level.

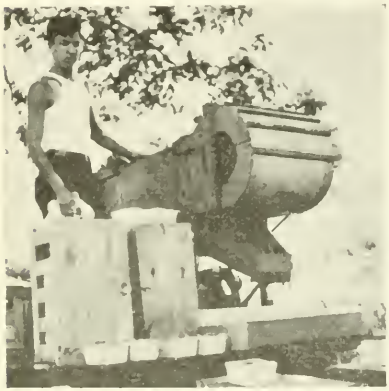

FIG. 14. Cleaning low bush blueberries

Cultivated Blueberries

Supplies increasing

New Jersey has been the principal source of cultivated blueberries for this area. Even in 1935 and 1936 over 500,000 quarts of cultivated blueberries were marketed from New Jersey at average prices of about 31 cents and 36 cents a quart respectively. In 1939 average wholesale prices still exceeded 30 cents a quart in Boston. But more cultivated berries are coming in from other areas and it is probable that increased supplies will result in lower prices in the future. The high cost of establishing cultivated blueberry plantings will make increases slower than with such fruits as strawberries, raspberries, and blackberries.

Premiums for Cultivated Blueberries in Boston

Prices of Maine and New Hampshire wild blueberries were compared with those for New Jersey cultivated berries in the period from July 24 to August 5, 1939. Average top prices per quart for bulk of sales of best berries were about 25 cents for wild Maine berries, 21 cents for wild New Hampshire berries, and 33 cents for cultivated New Jersey berries.

This indicates an average premium of about 8 cents to 12 cents per quart for the cultivated berries.

In New York City

Growers who contemplate setting the cultivated blueberry varieties will be interested in the premium for such berries in our markets. Top prices of wild and cultivated varieties were compared on the New York city market in July and August over the four years, 1936-1939. The cultivated blueberries came largely from New Jersey in July and August with a few Michigan berries in August. Wild berries came largely from Pennsylvania in the first half of July, and from Nova Scotia, Maine, and Massachusetts in the last half of July.

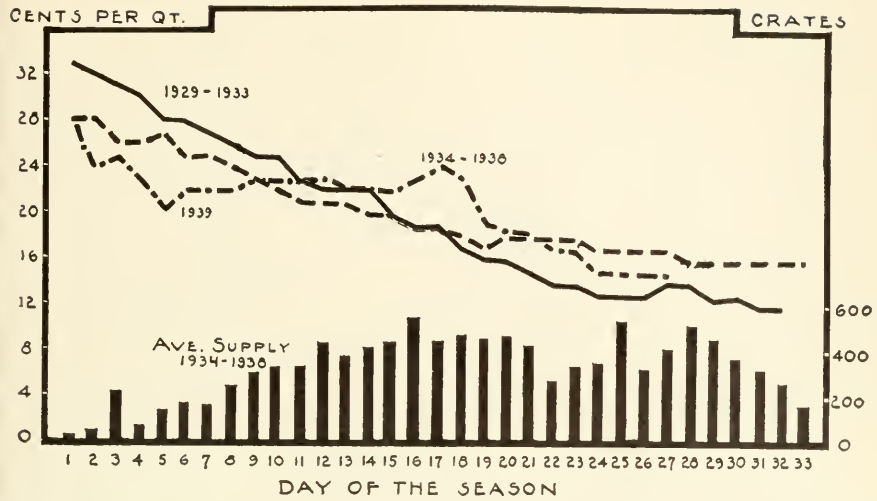

FIG. 15. Seasonal changes in blueberry supplies for 1934-38, and prices for 1929-33, 1934-38 and 1939, on the Farmers' Produce Market in Boston.

This seasonal downward trend in prices usually occurs in both Boston and New Hampshire markets.

Table XVIII.—Average top wholesale prices of cultivated and wild blueberries and premiums on cultivated varieties in New York City

(Prices in cents per quart)

	July				August			
	Cultivated	Wild		Premium	Cultivated	Wild		Premium
1936	44.6	— 28.2	=	16.4	54.1	— 29.5	=	24.6
1937	35.7	— 24.3	=	11.4	39.1	— 25.5	=	13.6
1938	32.	— 23.4	=	8.6	41.8*	— 24. *	=	17.8*
1939	31.2	— 23.5	=	7.7	34. *	— 29.5*	=	4.5*

*Based on few quotations.
Source: Producers' Price Current.

Grapes

Grape Production in New Hampshire

ALTHOUGH a large number of farms do have a few grape vines, there are very few commercial plantings in New Hampshire. One seldom sees vines given the commercial care which they receive in the grape-growing regions.

There were 3,362 farms which reported grapes in the census of 1934, but there was an average of but five vines per farm reporting. This average number has changed little over the past four census periods from 1909 to 1929, and has in each case averaged from 4.4 to 5 vines per farm reporting. The average value of the crop for the state in these four census periods was $10,764 and the average value per farm but $4.02.

According to the 1934 census, Hillsboro, Rockingham, and Mer-

rimack counties produced almost 85 per cent of the total grape crop for the state.

See appendix (Table IV) for comparative data on grapes over the last four census periods.

Although New Hampshire produced only about two and one-half per cent of the grapes produced in New England in 1929, the production per vine was more than twice that of New England and higher than for the United States according to the census report. The value per pound was also 50 per cent above that for New England and six times as great as that for the United States. If these figures are correct it appears that New Hampshire growers can profit in growing grapes for the local market. It would be necessary, however, to grow early varieties in order to assure maturity and obtain a satisfactory average return over a period of years.

Earlier grape varieties needed

Concord, Niagara, and Worden are among the common varieties of grapes grown in New Hampshire. In some seasons, fine grapes of these varieties have been produced, especially in the southern part of the state and in frost-free locations.

But often the grapes coming on the market from local sources are not well matured. The planting of early varieties should result in grapes of better maturity and in fewer losses from early fall freezes. Such varieties as the blue Van Buren and Fredonia, and the green Ontario and Portland are examples of early maturing kinds.

A grower near Franklin, N. H., recently reported several years of successful production of the Fredonia and Portland varieties. He stated that both were liked by customers and that Fredonia was outstanding in vigor and productiveness and more satsfactory than Concord. These grapes matured about two weeks earlier in his location.

More information is needed, however, on the performance of new varieties and growers who contemplate making plantings should keep in touch with the Agricultural Experiment Station for latest information concerning them.

Since few local grapes are sold in our markets, very little price information is available. The quality of the native grapes varies considerably.

The United States Department of Agriculture reports show farm prices of grapes ranging from three cents to five and one-half cents per pound over the past nine years. Prices of $1 to $1.50 per bushel for wild grapes, and the poorer grade cultivated grapes, and $1.50 to $2 for the better cultivated grapes are representative of prices over the past several years.

Smaller lots retailed and sold at roadside stands have ranged from 3 cents to 5 cents per pound during the last few years.

Estimates of grape production and farm prices in New Hampshire as given by the United States Department of Agriculture are shown in Table XIX.

Table XIX.—Estimated production and prices for grapes in N. H., 1930-39

Year	Pounds produced	Farm price per pound	Year	Pounds produced	Farm price per pound
1930	160,000	5½	1935	220,000	4
1931	160,000	4¾	1936	140,000	4¼
1932	180,000	4	1937	240,000	3
1933	220,000	4	1938	140,000	3
1934	180,000	4¾	1939	220,000	

Grapes for local markets

It does not seem likely that New Hampshire growers will be interested in growing grapes other than for local sale at present. Several growers in Rockingham, Hillsboro, and Merrimack counties are growing small acreages of grapes for local sale with some success. With the use of earlier bearing varieties it seems probable that growers can profitably take care of a larger portion of the local market. Baskets of red, white, and blue grapes add color to roadside-stand trade, and they will sell, if mature and of good quality, at prices higher than those in many other states.

Summary Statements and Conclusions

Kinds and varieties

A better selection of kinds and varieties of small fruits by those who grow for local markets could result in:

(a) Larger total sales in any market.
(b) Larger sales for each customer contacted.
(c) Spreading of risks.
(d) Distribution of labor over a longer period.
(e) A continuous supply which would assist in holding customers.

The Howard 17 variety of strawberry accounts for over half the acreage in the state and is grown by about 75 per cent of the producers. It has made more money for the average grower than any other variety. Catskill is now increasing in popularity, but still accounts for only a small per cent of the acreage.

Latham accounts for at least two-thirds of the raspberry acreage of the state.

Snyder, Eldorado and Blower are common varieties of blackberries grown. Varieties of the quality of Snyder will not increase the popularity of blackberries. Eldorado is a standard commercial variety.

Wild blueberries make up almost all the market supplies in New Hampshire. A number of producers have set a few cultivated varieties, but no patches of commercial size have been noted.

Concord, Worden, and Niagara are among the grapes frequently mentioned as being grown in New Hampshire. Earlier varieties are needed, and some of those now being tested by the Agricultural Experiment Station and by growers, are the blue Fredonia and Van Buren, and the green Portland and Ontario.

Supplies

The most common complaint of hotels and camps regarding small fruit supplies is that of lack of dependability.

We usually think of the local strawberry season as lasting about three weeks. The sales period of a western New Hampshire grower over 30 seasons varied from 15-42 days. Ten seasons ran from two to four weeks, and nine others ran from five to six weeks. This indicates that a longer period is possible.

Variation in the ripening dates of strawberries in different sections of the state is sufficient to make possible shifts in supplies from one section to another if surpluses should exist. Growers in late locations and in northern New Hampshire might consider shipments into the southern part of the state as well as to markets in southern New England and New York.

A combination of early and late raspberry varieties will definitely lengthen the supply period, and may give a sales period of six or seven weeks.

Blueberries are the only berries shipped out of the state in any quantity. There is a tendency for markets near producing areas to be over-supplied. This is especially true since many blueberries are picked by children and local people who place amounts too small to ship on the local market.

The majority of hotels, camps, and boarding houses appeared to be fairly well supplied with blueberries according to a 1937 survey.

Grape supplies are insufficient to take care of local markets. In the past five years production estimates have varied from 140,000 to 240,000 pounds.

Prices

Strawberry growers have averaged about 15 cents a quart on jobbing sales and 19 cents on retail sales over a five-year period ending in 1939. Prices have averaged highest in central and western New Hampshire. The average differential between grower jobbing and retail prices for strawberries is about 4 cents a quart.

Although a few early sales of strawberries may be made at a higher figure, late strawberry sales have brought higher average prices than early sales because of less competition from other areas.

Sullivan, Carroll, Coos, and Belknap counties had the highest average retail prices for strawberries in the 1937-1938 period, from 1.5 cents to 4.5 cents above the average for the state.

Average retail price of raspberries reported by growers and stores for 1937 and 1938 was about 15 cents per pint. Carroll county reported the highest average price.

Average jobbing prices for raspberries reported by growers ranged from about 11 cents to 16 cents and averaged over 12 cents per pint in the five-year period 1935-1939.

Blackberries vary greatly in price and quality. In 1938 retail prices in the state averaged about 20 cents a quart and jobbing prices 15 cents. Average price paid by hotels was 16 cents, by camps and tourist homes 19 cents, and by stores 15 cents per quart.

Blackberries brought highest prices in Carroll and Coos counties in 1937 and 1938. The average retail price for this state was about 19 cents per quart.

Prices of blackberries ranged from 15 cents to 21 cents on the Boston market in the first three weeks of August, 1939, a period when New Hampshire supplies should be available.

Grower reports show average jobbing prices of blueberries ranging from about 12 cents to 20 cents over a five-year period, with an average of nearly 15 cents a quart.

In 1938, highest jobbing prices for blueberries were reported in Rockingham, Grafton, Coos, and Merrimack counties.

Blueberry prices usually decrease as the season advances. Over a 10-year period in four New Hampshire cities quotations in the third week were 4-5 cents under the first week, and in the sixth week 2-3 cents under the third week.

Hotels, camps, and boarding houses purchased blueberries in 1937 at about 3 cents over grower jobbing prices and 2 cents under retail store prices.

New Hampshire blueberries have averaged from 3 cents to 6 cents a quart under Maine and Nova Scotia berries in the Boston market during the past five years.

Sales

Slightly over half the retail grocery stores and markets in Laconia carried strawberries in 1938, and the average purchase of native berries for the season was 24 crates.

In 1937 seasonal purchases of strawberries were reported as about 17 crates for hotels, 6 crates for camps, and 2 crates for tourist homes serving meals.

Raspberry varieties such as St. Regis, Chief, or Indian Summer permit earlier sales at favorable prices which also help in making customer contacts early in the season.

About 40 per cent of the independent retail food stores in Laconia carried raspberries in 1938 and the average weekly purchase was 96 pints. Growers retail over one-third of their red raspberries.

A 1937 survey showed average seasonal sales of native blackberries to hotels as 126 quarts, camps 35 quarts, and tourist homes serving meals, 35 quarts. The survey showed that but 14 per cent of the independent retail stores in Laconia carried native blackberries in season, and the average seasonal purchases were 136 quarts.

With a highly perishable product such as blackberries, it is particularly important to clear all stocks daily that are sold through stores. This can be done with proper grower-retailer cooperation.

Almost all independent grocery stores in Laconia and Lakeport, N. H. carried native blueberries in 1937 and average total purchases amounted to 867 quarts.

Baskets of red, white and blue grapes make attractive displays in roadside stands.

Market outlets

Local markets for berries can be expanded if adjustments are

made in production and marketing practices, and in selection of varieties and kinds which will make it possible to serve buyers with a greater variety of good quality fruit over a longer season.

With the exception of blueberries, our local markets are under-supplied rather than over-supplied with berries. Hotels, camps, and boarding houses offer additional outlets.

The variation between the peak picking dates of a Coos county and a Rockingham county strawberry grower, was 21 days. This should permit shipments within the state if surpluses should exist in either section.

Since there is a surplus of strawberries in only a few sections of the state, few are shipped to outside markets.

The late Boston market should be a suitable outlet for berries from northern New Hampshire. In 1939 Maine strawberries sold largely at the 16-cent to 19-cent level, well above the prices of late Massachusetts berries.

Raspberries are in season when summer hotels, and camps are in operation. Purchases of native red raspberries reported for the season in 1937 were 514 pints for hotels, 196 pints for camps, and 53 pints for tourist homes.

Northern towns in New Hampshire, Vermont, and Maine may prove satisfactory markets for early red raspberries, and cities to the south such as Boston and New York may prove suitable for late sales. Prices on the late New York market were higher than in Boston, or on New Hampshire local markets in 1938 and 1939, but not in 1937.

Market outlets for blackberries are limited. However, improved varieties and better merchandising should increase sales.

Although local markets in blueberry-producing areas tend to be over-supplied there are many markets in the state which require shipments from other areas. Coos, Grafton, and Rockingham markets are examples.

Medium size cities and towns not in blueberry-producing areas, as in northern and western New Hampshire and Vermont offer good market outlets.

Boston is a good outlet for blueberries, and prices are usually higher there than in New Hampshire cities. However, growers in the western part of the state may find Vermont markets more satisfactory outlets.

Opportunities in small fruits

Many excellent small markets for small fruits are scattered throughout the state. Large numbers of summer residents and visitors greatly increase the summer market.

Careful advance planning of a program for production and sales, would make possible a continuous supply of a variety of fruits for local sale.

The lack of dependability in local supplies and service is the most common criticism made. As a result considerable business is going to outside interests.

Many poultry and dairy farmers who already have retail egg and

milk routes could profitably grow and sell small fruits as a side-line.

In the northern half of the state, local growers are only partially taking care of nearby markets for strawberries and blackberries.

Most growers have sold all berries but blueberries in local markets. Few cultivated berry patches of over two acres have been noted. Growers with good late locations might consider growing berries for sale in markets to the south, as in southern New England and New York. Prices of raspberries and strawberries usually strengthen late in the season.

Late berries have little competition in local markets. Late raspberries and strawberries, might be grown in northern New Hampshire and other late locations for southern New Hampshire and markets farther south. Certainly, if Florida can ship strawberries, and Washington can ship raspberries and blackberries to New England cities, we ought to be able to do so.

In general, prices of small fruits are relatively good in New Hampshire. Yet no important increase in production has been noted. The difficulties seem to be largely in production. The choking out of plants with witch grass, the weakening or loss of raspberry canes by mosaic and winter killing, late setting of plants, trouble in obtaining pickers, are examples of common difficulties. Many growers fail to appreciate the importance of a definite plan and the carrying out of that plan on schedule. This applies to contacts with markets in advance of the season as well as in matters of production.

The fact that berries are highly perishable, really places us in an advantageous position for servicing local markets.

There should be a good market for everbearing strawberries in late July and August, but few producers have learned to produce them successfully. Important requirements are early setting and irrigation.

A limited but good market exists for blackberries. Production of better quality berries and greater care in picking and handling are necessary to develop a larger market.

Little development has been noted in the production and sale of cultivated blueberries in the state, although numerous small plots have been set. There ought to be an opportunity for establishing a few small blueberry nurseries in the state. The costs of setting and bringing an acre of cultivated blueberries into production are large, and this has discouraged any rapid increase in plantings. Nevertheless, there will be, doubtless, some development in the production and sale of cultivated varieties.

Many who have wild blueberry patches sell picking privileges to others. A few low-bush growers hire pickers and harvest many hundred bushels during the season. Low-bush berries have the advantage of smaller picking costs than high-bush blueberries.

There should be a good opportunity to sell more good-quality, early grapes in local markets. Very few of the newer early varieties are in bearing in the state. Satisfactory results have been noted with varieties such as Fredonia (blue) and Portland (green), as far north as Franklin.

Appendix

Table A I.—Strawberries—Production and prices in New Hampshire (census data)

	1899	1909	1919	1929	1934
Number of farms reporting		1594	2197	1344	1097
Acres reported	307	310	366	324	299
Average no. acres per farm		.19	.17	.24	.27
Total quarts produced	568,640	638,057	489,774	594,921	431,635
Average quarts per farm		400	223	443	393
Average yield per acre	1852	2058	1338	1836	1444
Total value		$68,552	$117,545	$132,656	$73,378
Value per acre		$221	$321	$409	$245
Value per farm reporting		$ 43	$ 54	$ 99	$ 67
Value per quart		$ .11	$ .24	$ .22	$ .17

Table A II.—Raspberries—Production and prices in New Hampshire

	1899	1909	1919	1929
No. farms reporting	———	657	1,181	823
Acres reported	80	85	208	131
Av. no. acres per farm	———	.13	.18	.16
Total quarts produced	124,760	86,558	130,991	104,139
Av.no. quarts per farm reporting	———	132	111	126
Av. yield per acre (qts.)	1,559	1,018	630	795
Total value	———	$11,821.	$37,988.	$32,494.
Value per acre	———	139.	183.	248.
Value per farm reporting	———	$18.	$32.	$39.
Value per quart	———	$ .14	$ .29	$ .31

Table A III.—Blackberries—Production and prices in New Hampshire

	1899	1909	1919	1929
No. farms reporting	———	522	800	408
Acres reported	65	67	141	47
Average no. acres per farm	———	.13	.18	.12
Total quarts produced	105,290	75,913	90,666	36,640
Average no. quarts per farm reporting	———	145	113	90
Yield per acre (quarts)	1620	1133	643	780
Total value	———	$7,793	$20,854	$8,403
Value per acre	———	.116	148	179
Value per farm reporting	———	15	26	21
Value per quart	———	.10	.23	.23

Table A IV.—Grapes—Production and prices in New Hampshire (Census data)

	1899	1909	1919	1929	1934
No. farms reporting	———	3,184	2,740	1,645	3,362
Vines of bearing age reported	54,531	15,802	12,998	7,211	16,520
Vines of bearing age per farm reporting	———	5.0	4.7	4.4	5.
All vines	———	18,818	15,841	9,365	19,103
Total pounds produced	487,500	375,164	214,514	104,283	181,423
Pound produced per bearing vine	9	24	16	14	11
Total value	$14,426	$10,926	$17,162	$6,259	$8,708
Value per bearing vine	.26	.69	1.32	.87	.53
Value per pound	.03	.03	.08	.06	.05

Table A V.—Relative acreage and numbers of growers reporting different strawberry varieties, 1935-1929

Variety	Per cent producers reporting						Per cent of total acreage					5-year
	1935	1936	1937	1938	1939		1935	1936	1937	1938	1939	Ave.
Howard 17	76	63	78	88	78		69	45	51	59	51	55
Catskill	3	*	10	18	24		1	—	1	8	7	3.4
Dorsett	4	30	23	18	17		2	2	3	6	2	3.0
Fairfax	4	30	21	21	12		3	1	5	4	1	2.8
Mastodon	7	7	8	9	12		2	6	4	1	A	2.6
Aberdeen	8	20	16	7	7		3	1	4	1	2	2.2
Commonwealth	5	*	4	*	*		5	—	2	1	—	1.6
Howard Supreme	7	13	4	*	*		2	1	1	1	—	1.
Gem	*	—	6	2	15		—	—	1	A	2	.6
Chesapeake	3	13	3	3	5		A	A	A	A	A	.2
Wayzata	—	7	*	*	10		—	A	A	A	A	.1
Jupiter	3	10	*	*	—		A	A	A	A	A	.1
Mixed and others	19	20	11	12	17	Acreage	13	13	27	19	32	27.
No. producers reporting	76	30	73	90	41	reported	29	15	28.1	20.2	13.6	21.2

*But one producer reporting

A—Less than 1%

Table A VI.—Prices and yields for red raspberries as received by New Hampshire growers, 1935-1939

Year	Reports included	Acres included	Average sales per grower	Price per pint on Retail sales	Price per pint on Jobbing sales	Price per pint on All sales	Average yield (acre basis)	Gross returns (acre basis)
	Number		Pints	Cents	Cents	Cents	Pints	Dollars
1935 (A)	32	10.4	767	16.2	11.9	13.3 (C)	3081 (B)	410
1936	13	4.3	1338	14.7	11.2	11.5	4084	470
1937	38	11.9	1430	13.5	11.6	12.4	3718	461
1938	30	7.3	766	14.8	10.8	12.9	2140	276
1939	17	5.9	521	17.8	16.2	16.6	1142	190
5-year average A	26	7.9	964	15.4	12.4	13.4	2833	362

(A) Simple averages
(B) Based on 2420 plants per acre
(C) Estimate based on two-thirds jobbing and one-third retail sales.

Table A VII. Summary of strawberry sales records of a western N. H. grower[1]

Year	Picking dates			Total qts. sold	Prices per quart		
	First	Peak	Last		Lowest* Cents	Highest Cents	Wgt. average Cents
1900	June 23	July 8	July 21	3283	7½	16	12.5
1901	June 24	July 3	July 12	1706	5	15	11.4
1902	June 23	July 5	July 23	2393	10	16	12.4
1903	June 13	July 3	July 23	1461	8	18	16.1
1904	June 18	July 2	July 20	3928	8	15	12.9
1905	June 22	July 7	July 13	6189	8	16	11.3
1906	June 22	July 7	July 24	6159	10	20	15.9
1907	July 2	July 13	July 22	2313	8½	20	16.6
1909	June 26	July 10	July 30	2942	10	18	14.9
1910	June 17	July 2	July 26	5373	10	20	13.1
1911	June 17	July 3	July 25	1438	18	22	18.1
1912	June 22	July 3	July 23	3635	15	20	17.
1913	June 23	July 12	July 26	3998	20	23	20.
1914	June 22	July 8	July 28	4427	10	20	14.
1915	June 21	July 10	July 29	3382	16	20	16.7
1916	June 29	July 15	July 31	5276	10	20	15.7
1917	July 5	July 16	Aug. 4	4136	15	25	18.3
1918	June 10	June 29	July 29	8791	20	30	23.5
1919	June 21	July 2	July 19	5147	28	36	33.1
1920	June 26	July 10	Aug. 3	8618	20	45	30.9
1921	June 11	June 25	July 2	4214	12½	45	34.
1922	June 16	June 27	July 22	3173	15	35	22.8
1929	June 24	July 6	July 27	1835	7½	33	20.8
1930	June 18	June 25	July 9	924	15	35	25.
1932	June 28	July 5	Aug. 5	1491	13	25	17.9
1933	June 23	July 3	July 20	1626	6½	25	13.6
1934	June 19	July 3	July 23	2283	7	27	13.3
1935	June 28	July 10	July 22	1570	10	22	16.7
1936	June 20	July 2	July 15	1871	10	29	21.6
1937	June 19	July 13	July 26	1978	10	27	21.9
1938	June 21	July 5	July 15	311	10	25	23.6
1939	June 22	July 8	July 26	2671	8	27	18.1

*Low prices are for seconds and canning stock.
[1]Mrs. G. E. Gay, Charlestown, N. H.

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